ANOMALOUS DATA

This section identifies data that may be questionable/suspect or erroneous, correlates these data with any relevant documentation, provides justification for the removal of any data determined to be erroneous, and details any related manipulation of the data by the 2005 Data Rescue Manager. Questionable or suspect data may be compromised in quality but remain in the data set. The user should evaluate and use these data with caution. Data that have been removed from the final data set are still present in unedited and/or raw data files. Please see the FGDC compliant metadata document for more information on the quality assurance/quality control procedures used to identify erroneous or suspect data. The following information is organized by parameter group in chronological order.

Field Parameters

07/27/1999 – 09/24/1999, CISNet #s 1-3, all samples: a hand-held thermometer was used to record temperature for these samples, data only accurate to the whole number.

05/15/2000, CISNet #6, ace1: the dissolved oxygen values for this sample are suspect. The Data Technician noted that the Hydrolab Dissolved Oxygen probe was malfunctioning and did not take readings for the subsequent samples.

06/14/2000, CISNet #7, all ni samples: the temperature and pH data for these samples were collected with a handheld thermometer and pH meter because the Hydrolab was malfunctioning.

07/17/2000 and 07/18/2000, CISNet #8, all ace and ni samples: the dissolved oxygen values for these samples are suspect. The CISNet Technician reported severe drift in the readings.

08/14/2000 and 08/15/2000, CISNet #9, all ace and ni samples: the dissolved oxygen values for these samples are suspect. The CISNet Technician reported accuracy concerns.

09/11/2000 and 09/12/2000, CISNet #10, all ace and ni samples: the dissolved oxygen and Hydrolab salinity values for these samples are suspect. The CISNet Technician reported accuracy concerns with for the dissolved oxygen probe and difficulty calibrating the salinity probe.

10/16/2000 and 10/17/2000, CISNet #11, all ace and ni samples: a YSI unit was used to take the temperature, salinity, conductivity, and dissolved oxygen measurements normally taken with the Hydrolab. In addition, for all but ni1 (data collected at 0.5 meters), the measurements were collected on the surface rather than at 0.5 meters. For all ace samples, pH was measured with a handheld pH meter from water samples brought to the lab (at 22:00). For all ni samples, pH was measured with the handheld meter in the field.

03/26/2001 and 03/27/2001, CISNet #12, all ni and ace samples: all dissolved oxygen data for these samples were collected using a YSI unit (rather than the Hydrolab).

05/21/2001, CISNet #13, all available ace samples: dissolved oxygen data for these samples were collected using a YSI unit (rather than the Hydrolab).

05/21/2001, CISNET #13, ace1, 3, and 4 samples: the dissolved oxygen (percent saturation) values for these samples are suspect. The CISNet Technician noted that the oxygen sensor was not working properly and had marked the ace 1 and ace3 samples in particular as questionable.

07/02/2001 and 07/03/2001, CISNet #14, all ace and ni samples: the pH was measured with a handheld pH meter from water samples brought back to the lab (at 15:00 for both).

09/18/2001, CISNet #15, all ni samples: the pH was measured with a handheld pH meter from water samples brought back to the lab (at about 16:00).

Nutrients

*Total Nitrogen, Total Dissolved Nitrogen, Total Phosphorus, and Total Dissolved Phosphorus data for the entire data set are somewhat suspect. There are numerous occasions where the Total Nitrogen or Phosphorus value is less

than the Total Dissolved value, which should be impossible. While some of these discrepancies may be attributed to an acceptable level of analysis error, many are significant enough to be considered suspect or erroneous. These suspect data were not censored and were used to calculate means. In some situations, even the mean Total Nitrogen or Phosphorus value is lower than the dissolved value. There are also numerous occasions where negative values were calculated and used to determine a mean. In some cases the mean is negative.

**Very small Nitrate-Nitrite and Ortho phosphate values are also suspect. It appears that small negative values in the raw data were changed to zeros in the database. These values are an important indicator of error in the measurements, and as long as they are within the accepted error for the analysis, should not have been discarded or altered.

04/03/2000, CISNet #4, ace 5: replicate "a" for this sample was entered as zero. The 2005 Data Manager checked the raw data and determined that the actual value was negative, but had been entered as zero. Since negative values help to indicate error, it was reentered and the mean for sample ace5 was recalculated with the correct value.

04/04/2000, CISNet #4, ni1 and ni5: total nitrogen means for these two samples are based on only 2 replicates, the CISNet Technician marked "over" under the concentrations on the raw handwritten data sheets for the first replicates of both samples.

04/18/2000, CISNet #5, ni2: total nitrogen and total phosphorus means for this sample are based on only 2 replicates, the third replicate was apparently never processed.

05/22/2001, CISNet #13, ni5 sample: All nutrient and suspended solid data are means of 2 replicate sub-samples rather than the normal 3. Replicate c was apparently never analyzed.

07/03/2001, CISNet #14, ni2: total nitrogen and phosphorus means for this sample are based on only two replicates (instead of 3), apparently the third replicate was never analyzed.

09/17/2001, CISNet #15, ace4: the ortho phosphate measurement for replicate c was recorded erroneously. The 2005 Data Rescue Manager verified the actual measurement with the raw data and corrected it in the Rescue Process and final spreadsheets, not in the original.

Suspended Solids

05/22/2001, CISNet #13, ni5 sample: All nutrient and suspended solid data are means of 2 replicate sub-samples rather than the normal 3. Replicate c was apparently never analyzed.

Chlorophyll

03/26/2001 – 07/03/2001, CISNet #s 12-14, all samples: the chlorophyll data for these samples was corrected for Fluorometer drift. The corrections can be seen in the Original and Rescue Process Spreadsheets.

Chlorophyll deviated from standard protocol for CISNET #13. See email note in Raw Data Archive.

05/22/2001, CISNet # 13, ni5 sample: the mean chlorophyll reported for this sample was based on 2 replicates rather than the normal 3. Replicate c was not collected, lost, or simply not analyzed.

05/21/2001 – 09/18/2001, CISNet #s 13-15: chlorophyll data were no longer calculated with the intercept correction. The correction was determined to be insignificant by the Primary Investigator.

Light Profile

10/16/2000, CISNet #11, ace 1: the light profile is suspect for this sample site. The CISNet Technician noted that the current was very strong and that the measurements may not be accurate.